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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/710,487	11/10/2000	John Josef Hench	1340P082	5334

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EXAMINER	
TRAN, THIEN D	

ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/710,487	HENCH ET AL.	
	Examiner	Art Unit	
	Thien D. Tran	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02/24/2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4,6-20,22,24-31,33 and 35-41* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4,6-20,22,24-31,33 and 35-41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1, 2, 4, 6-20, 22, 24-31, 33, 35-41 are rejected under 35 U.S.C. 102(e) as being participated by Gaikwad et al (U.S Patent No 6,317,495 B1).

Regarding claim 1, Gaikwad discloses a method for the determination (prediction) and optimization of a communications system comprising:

inputting data from a plurality of channels of the communications system, figures 2 and 4;

determining (predicting) a performance of at least one of the plurality of channels using a plurality of parameters to characterize the performance of the channel, col.59 lines 15-25;

creating at least one transfer function model of the at least one of the plurality of channels, wherein the transfer function model is simulated using physical configuration information of the communication system, figure 15; and

optimizing the channel transfer function such as function of frequency, signal strength, phase shift, function of transmit spectrum...etc (parameters) of at least one of the plurality of channels in order to improve a capacity in bit rate of the at least one of the plurality of channels in the communications system. See col.16 lines 50-65, col.17 line 45, figures 9-14.

Regarding claims 13, Gaikwad discloses asystem for the prediction and optimization of a communications system comprising:

a determination module (prediction module), wherein the determination module determines (predicts) the performance of at least one channel in the communications system by providing a characterization of at least one parameter that describes the channel, col.16 lines 45-61;

and an optimization module, wherein the optimization module finds the optimum characterization for the channel based on at least one design criteria. See figures 14, 15, 27, col.21 and 22.

Regarding claim 20, Gaikwad discloses a method for the prediction of the performance of a communications system comprising:

inputting data from at least one channel of the communication system into a prediction module (col.15 lines 10-15);

creating at least one transfer function model of the at least one channel; determining an impairment on the at least one channel (col.16 lines 40-60, figure 9);

characterizing the at least one channel using the at least one transfer function model and the impairment. See col.16 and 17.

Regarding claim 30, Gaikwad discloses a method for the prediction and optimization of a communications system comprising:

inputting data from at least one channel of the communications system col.18 lines 60-67;

predicting a performance of at least one of the channels using at least one parameter to characterize the performance of the channel, col.28 lines 35-55; and

optimizing at least one parameter of at least one of the channels in order to improve a bit rate of the at least one of the channels in the communications system. See col.17 lines 40-55.

Regarding claims 2, 31, Gaikwad discloses the determining the performance of the at least one of the plurality of channels comprises:

inputting data from at least one channel of the communications system into a prediction module;

creating at least one transfer function model of the at least one channel, col.18 lines 60-67;

determining an impairment on the at least one channel, col.28 lines 25-35;

characterizing at least one channel using the at least one transfer function model and the impairment. See figure.9

Regarding claims 4, 22, 33, Gaikwad discloses that at least one transfer function model is created using a spectrum management system. See col.19 lines 10-25.

Regarding claims 6, 14, 24, 35, Gaikwad discloses that the impairment is selected from the group consisting of: a cross-talk impairment, an AM radio interference, a temperature impairment, and any combination thereof. See col.9 lines 5-35.

Regarding claims 7, 36, Gaikwad discloses the optimizing the parameters comprises: a) choosing a first parameter for the channel;

b) choosing a second parameter for the channel;

c) determining an optimization criteria for the channel based upon the first parameter and the second parameter;

d) repeating a) - c) until the optimization criteria is optimized for the communications system. See figures 27 and 40.

Regarding claims 8, 15, 25, 37, Gaikwad discloses that the communications system is a wireline communications system. See col.14 lines 50-60.

Regarding claims 9, 16, 26, 38, Gaikwad discloses that the communications system is a wireless communications system. See col.14 lines 50-60.

Regarding claims 10, 17, 27, 39, Gaikwad discloses that the communications system is an optical communications system. See col.14 lines 50-60.

Regarding claims 11, 18, 28, 40, Gaikwad discloses that the communications system is a cable communications system. See col.14 lines 50-60.

Regarding claims 12, 19, 29, 41, Gaikwad discloses that the communications system is a DSL communications system. See col.14 lines 45-60.

Response to Arguments

3. Applicant's arguments filed 02/24/2005 have been fully considered but they are not persuasive.

Applicant argues that Gaikwad does not disclose a simulation of a physical configuration of the communication system. However, Examiner respectfully disagrees with the argument because Gaiwad discloses simulation for a physical configuration system, col.25 lines 55-65.

Applicant argues that Gaikwad does not disclose a determining of transfer function of a communication channel. However, Examiner respectfully disagrees with the argument because Gaikwad discloses a determining of transfer function of a communication channel, figure 9.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Thien Tran whose telephone number is (571) 272-3156. The examiner can normally be reached on Monday-Friday from 8:30AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (571) 272-3155. Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-2600.

6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197.

Patent Examiner

Thien Tran

DUC HO
PRIMARY EXAMINER

6-10-05